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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/535,114	05/16/2005	Masaya Kinoshita	450100-04819	3614

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EXAMINER	
HSU, AMY R	

ART UNIT	PAPER NUMBER
2622	

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05/27/2009	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/535,114	KINOSHITA ET AL.	
	Examiner	Art Unit	
	AMY HSU	2622	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *23 February 2009*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-40* is/are pending in the application.

4a) Of the above claim(s) *5,9-11,13,14,19,23-25,27-28,33,37-40* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-4,6-8,12,15-18,20-22,26,29-32 and 34-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Response to Arguments

1. Applicant's arguments filed 2/23/2009 have been fully considered but they are not persuasive. The amendments currently add to the independent claims the limitations of "...a signal component other than a flicker component is extracted as the normalized integrated value or the normalized value..." However the Office maintains the previous rejection, and cited prior art still teach the claims as amended. Specifically, Kasahara teaches normalizing the integrated value, then extracting or taking a part or section of the normalized integrated value. Said section is not a flicker component as required by the amended claim. Rather, it is an extracted portion of the normalized integrated signal which is subsequently analyzed for flicker detection, and will be described in more detail below.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. Claims 1-4,6-7,12,15-18,20-21,26,29-32,34-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasahara et al. (US 6710818).

Regarding Claim 1, Kasahara teaches a flicker reduction method for reducing a fluorescent light flicker component in a video signal or a luminance signal obtained by photographing a subject through an XY addressing type image pickup element under an illumination of a fluorescent lamp (*Col 2 Lines 32-43 and Col 8 Lines 28-33),* comprising:

a step of integrating the video signal or the luminance signal, as an input image signal, throughout a duration of time equal to or longer than one horizontal period (*Col 8 Lines 10-12 and Fig. 1 reference number 1, integrating circuit),*

a step of normalizing the integrated value or a difference value between the integrated values of adjacent fields or adjacent frames (*reference number 3 and Col 8 Lines 51-55 teaches normalizing the integrated values by finding an average. Note that applicant's specification also supports this interpretation of the concept of normalizing integrated values by the average value between fields.),*

a step of extracting a spectrum of the normalized integrated value or the normalized difference value (*Fig .1 reference number 4 is a dividing circuit which takes input from the integration circuit as well as input from the averaging circuit to extract a certain portion of the normalized value, as opposed to the entire signal from the averaging circuit),*

**wherein a signal component other than a flicker component is extracted as the normalized integrated value or the normalized difference value (*the signal extracted by the dividing circuit is not a flicker component, but is ratio or comparison of an integrated value with respect to the average of the integrated*

values as taught in Col 8 Lines 61-66, which subsequently is analyzed for flicker, but is not in itself a flicker component),

a step of estimating a flicker component from the extracted spectrum (*the input to reference number 5, which is the extracted spectrum of the normalized or averaged value is analyzed by the flicker judging circuit for flicker detection)*, and

Another embodiment of Kasahara teaches a step of performing a calculation operation on the estimated flicker component and the input image signal to cancel out the estimated flicker component (*flicker compensation signal generation circuit, reference number 92 and Col 16 Lines 23-28, which teaches a method to compensate for, or cancel out the flicker component, in this case through adjusting the settings).* It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the first embodiment of Kasahara with the tenth embodiment of Kasahara because the first embodiment focuses on a method of accurately detecting flicker, and one of ordinary skill in the art would realize this detection must be used for reducing or eliminating that detected flicker component. Therefore it would have been obvious to look to other embodiments for more detailed method of using the detected flicker and use calculations to reduce the flicker.

Regarding Claim 2, Kasahara teaches a flicker reduction method for reducing a fluorescent light flicker component in each of color signals (*Fig. 1 shows the input is a video signal, and Fig. 6A shows it is comprised of color signals)* of colors obtained by

photographing a subject through an XY addressing type image pickup element under an illumination of a fluorescent lamp, comprising steps as addressed with Claim 1.

Regarding Claim 3, Kasahara teaches a flicker reduction method for reducing a fluorescent light flicker component in both a luminance signal and each of color signals of colors (*Col 10 Lines 57-60 teaches reducing a flicker component on a signal which represents the luminance signal Y, also Fig. 6A shows color signals are the signals on which flicker detection is performed)*, obtained by photographing a subject through an XY addressing type image pickup element under an illumination of a fluorescent lamp, comprising steps as addressed with Claim 1.

Regarding Claim 4, Kasahara teaches the flicker reduction method according to claim 1, wherein the normalizing step comprises dividing the difference value by the average value of the integrated values of a plurality of consecutive fields or consecutive frames (*Col 8 Lines 10-20 the diving circuit divides the integration results by the averaged result of a plurality of fields or frames)*.

Regarding Claim 6, Kasahara teaches the flicker reduction method according to claim 1, wherein the normalizing step comprises dividing the difference value by the integrated value (*Col 8 Lines 10-20 the difference value is the integration results of*

horizontal lines, and is divided by the integrated value, which is averaged result of the integration values).

Regarding Claim 7, Kasahara teaches the flicker reduction method according to claim 1, wherein the spectrum extracting step comprises Fourier transforming the normalized integrated value or the normalized difference value. *The flicker judging circuit contains spectrum analyzing means to detect or estimate the flicker component as addressed in claim 1, and Col 9 Lines 1-2 teaches the flicker judging circuit also includes a Discrete Fourier Transform circuit which transforms its input, which is the division result or the normalized value.*

Regarding Claim 12, Kasahara teaches the flicker reduction method according to claim 1, wherein the estimated flicker component is adjusted and the adjusted flicker component and the input image signal are subjected to the calculation operation. Col 16 Lines 23-35 teaches the flicker component is compensated for by the compensation signal generation circuit which performs calculations regarding the illumination flicker frequency. The input image signal is subjected to the calculation operation to determine flicker component as addressed with claim 1.

Note that the language of claim 12 is broad and the term "calculation operation" also previously recited in claim 1 can be interpreted as any kind of calculation. Also the relationship between the adjusted flicker component and the input image signal with

respect to the calculation operation is not defined, so it can be interpreted that each of the adjusted flicker component and the input image signal can separately be subjected to any kind of calculation operation, rather than in connection or with respect to each other.

Claims 15-18, 20-21, and 26 are rejected similarly to claims 1-4, 6-7, and 12, where Kasahara teaches the flicker detection apparatus in the context of an image pickup device.

Claims 29-32, 34-35 are apparatus claims corresponding to the method claims of claims 1-4, 6-7 and are rejected similarly.

4. Claims 8, 22, 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kasahara et al. (US 6710818) in view of Sakurai et al. (US 6850278).

Regarding Claim 8, Kasahara teaches the flicker reduction method according to claim 1, but does not teach if it is determined that the level of the input image signal falls within the saturation region, the input image signal is output as is as an output image signal. However, it is well known in the art to detect saturated levels of an input image and to output accordingly. Sakurai teaches in Col 18 Lines 15-20 a saturated pixel discrimination circuit which determines a whether a pixel is within the saturation region. Then it is output on the basis of the discrimination result.

It would have been obvious to one of ordinary skill in the art at the time of the invention to modify the teaching of Kasahara with that of Sakurai to realize the flicker reduction method with detecting for saturated levels and to output the corresponding signal because a saturated region could indicate either flicker does not need to be reduced in that region, or it could indicate no further processing should be performed on such a region, and that this region should be outputted.

Claims 22 and 36 are rejected similarly to claim 8.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to AMY HSU whose telephone number is (571)270-3012. The examiner can normally be reached on M-F 8am-6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lin Ye can be reached on 571-272-7372. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Amy Hsu
Examiner
Art Unit 2622

/NHAN T TRAN/
Primary Examiner, Art Unit 2622